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Monthly Statistical Report

Finance, Accounting, and Statistics Department

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SUMMARY

Total deliveries' growth recovered in August after July's decline, rising 1.8 percent versus one year earlier. This suggests that whatever weakness there may have been in July's deliveries was short-lived, and that the underlying growth in consumption has been continuing. Even including July's slight decline, over the past five months growth in total deliveries has still averaged about 2.5 percent, more or less in line with estimated consumption.

Although gasoline deliveries' increase of 0.5 percent for the month was quite modest and followed an even-weaker July, other indicators suggest that gasoline consumption is still rising at a slightly higher rate. For distillate, July's only-modest growth in deliveries strengthened to 5.4 percent in August. Deliveries of kerosine jet fuel rose nearly 8 percent in August, though the increase was essentially attributable to the military fuel switchover rather than actual demand growth for aviation fuels overall. Residual fuel oil deliveries rose 1.1 percent.

August's imports slipped marginally from July's record high. But, at 9.9 million B/D, they still exceeded the estimated underlying need for imports by roughly 1 million B/D. As a result, domestic petroleum inventories rose for the second month by a larger-than-average amount, bringing the total increase in domestic inventories over the past two months to about 55 million barrels—about 45 million barrels more than average. Product imports, particularly for gasoline, were strong in August. Product imports rose over 25 percent to 2.24 million B/D, their highest August level in six years. Imports of finished gasoline of more than half a million B/D were boosted by continued incremental imports from Europe substituting at the margin for domestic gasoline refinery output.

Despite the rise in total stocks, crude stocks fell 5 million barrels to 322 million barrels, 20 million barrels below the average for August and near the bottom of the range of the past several years. Gasoline inventories fell 5 million barrels to 206 million barrels, a level not far below the recent-year average for August. Distillate stocks rose 6 million barrels to 136 million barrels, 10 million above average. However, the requirement to keep low and high sulfur distillates segregated in storage and transportation has likely raised minimum operating inventories, though to what extent is unknown.

For August, input to distillation units increased 3 percent over year-ago levels to nearly 14.5 million B/D, its fifth month in a row at over 14.4 million B/D. For the summer's peak activity months of June through August, utilization has averaged 95.3 percent of reported capacity, up a full percentage point from one year earlier and the highest for the three-month period since at least 1975, when monthly utilization data was first collected.

Crude oil production continued to decline. Nationally, crude production dropped 2.9 percent from August to August, compared to an average 3.8 percent annual decrease in the second quarter. In Alaska, crude oil production was down by roughly 30 thousand B/D, or 2.0 percent, from last August.

PRODUCT SUPPLIED

Gasoline

DEMAND GROWS WITH MORE HIGHWAY TRAVEL. Although gasoline deliveries' increase of 0.5 percent for the month was quite modest and follwed an even-weaker July, other indicators suggest that gasoline consumption is still rising at a higher rate closer to 1-1.5 percent.

For one, the economy is still doing well versus a year ago, and growth in highway travel, at least through June, has been holding up as well. The latest Federal Highway Administration data show that highway travel rose 3.1 percent for that month and a similar amount for the second quarter as a whole, with no real signs of slowing. We estimate that this rate of growth in travel is continuing and that, after a partial offset for fuel efficiency, gasoline consumption is still rising at about a 1.5 percent rate. This is essentially the same rate of growth in deliveries as in the second quarter, according to recently-released monthly data from the Energy Information Administration. EIA's monthly data show a 1.4 percent increase in gasoline deliveries for the second quarter, essentially confirming API's original estimate of 1.5 percent for the same period.

API ESTIMATES

	AUGUST		YEAR-TO-DATE	
	Million B/D	Percent Change	Million B/D	Percent Change
Total domestic deliveries	17.6	1.8	17.6	3.4
Crude production	6.6	(2.9)	6.6	(3.3)
Total imports	9.9	17.2	9.0	6.0
Stocks (million bbl)	1,080	(1.1)	na	na

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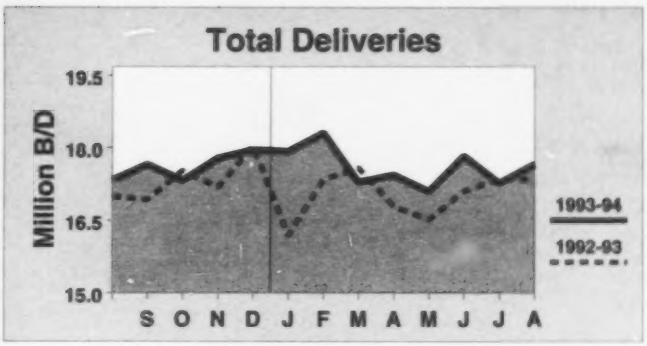
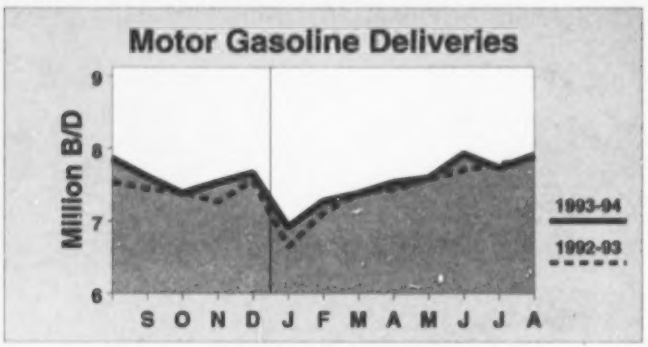
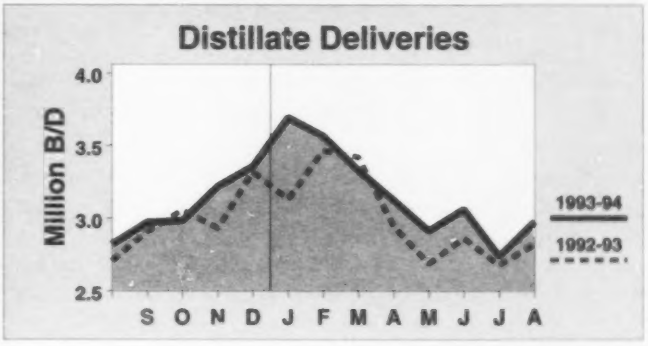
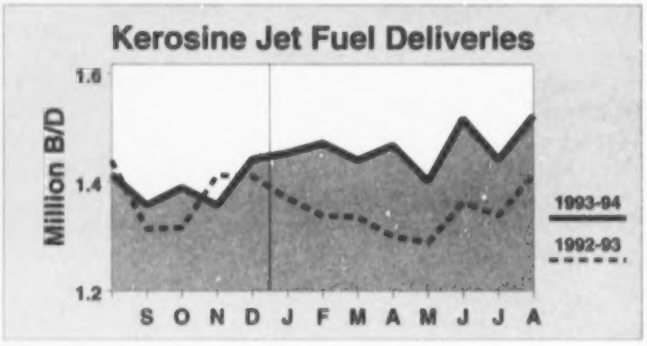








Oxygenated gasoline accounted for 8 percent of deliveries in August and averaged 10 percent for the peak summer driving season (June-August). This was up from a 7 percent share last summer, but well below levels experienced in the wintertime peak oxygenate season. Last January, for example, oxygenated gasoline accounted for a substantial, 36 percent of deliveries, or over 2.5 million B/D.

Distillate Fuel Oil

COMMERCIAL GROWTH STRENGTHENS DELIVERIES. After only a modest increase in July, deliveries of distillate fuel oil rose a stronger 5.4 percent in August. Despite the sometimes-volatile nature of single-month changes, strong growth in distillate demand so far in 1994 has been clearly evident in the year-to-date rise in deliveries of about 6 percent. Perhaps 1 percent of that was due to the severe cold early in the year, which had an impact not only on heating oil demand but on electric utility consumption of diesel in peaking units.

The remainder of distillate's increase is squarely in the realm of economic growth, and transportation demand in particular. So far this year, manufacturers' sales have risen about 7 percent versus last year, even after adjusting for inflation, according to Commerce Department data. Wholesale trade has risen about 4 percent, and retail trade, 6-7 percent. All of these suggest strong growth in the demand for transportation services, including highway diesel. Demand for rail services has also grown rapidly in 1994, with year-to-date ton-miles up 8 percent versus last year. The growth in rail traffic has been even higher more recently—12 to 13 percent for August—partly because of the problems caused a year ago by flooding in the Midwest.

August's deliveries of low-sulfur distillate returned to a level even higher than June's nearly 2 million B/D, after slipping to 1.7 million B/D in July. Meanwhile, deliveries of high-sulfur distillate continued at around 1 million B/D as they have since the end of the last heating season. Although some filling of heating oil storage continues through the summer, past years' data suggest that deliveries of heating oil have not usually picked up until September or October.

Kerosine Jet Fuel

DEFENSE CONVERSION CAUSES HIGH DEMAND. Defense conversion and sustained commercial airline demand have led to record levels of jet kerosine deliveries, although the underlying pattern of growth is not as strong as the high delivery figures suggest. In August, deliveries of jet kero were more than 7 percent higher than the deliveries in August of 1993. For the year to date, cumulative deliveries are 9 percent greater than deliveries during the same interval in 1993.

The increase in the year to date deliveries are the result of unusual, non-recurring events rather than long-term changes in demand. This year's record high levels of jet kero deliveries can be attributed mainly to two factors: the blending of jet fuel with diesel during the unusually cold earlier months of the year, and the recent conversion of military aircraft from a naphtha-based fuel to a kerosine-based fuel. After the conversion of military aircraft stationed in the East Coast and Gulf States to jet kero was completed in early June, demand for jet kero was expected to average more than 150 thousand B/D more than before the conversion process began. Final demand for jet kero has risen only an average of 140 thousand B/D for June, July, and August, compared to the same months in 1993. Since this change closely corresponds to the expected effect of military conversion, it suggests that other sources of demand have been relatively static.

The major source of demand for jet kero is still the commercial airlines, which account for more than 1 million B/D of total deliveries. As an industry, airlines have been reducing the total miles

flown while increasing the total number of revenue passenger miles. While total revenue miles have been increased by nearly 4 percent during the year to date compared with the same interval in 1993, the increase has been higher in the last three months, and currently the total revenue miles are growing between 6 and 8 percent. At the same time, the total number of available passenger miles has been shrinking, and for the year to date the airlines have flown nearly 1 percent less total miles than they flew in 1993. The ratio of revenue passenger miles to total available passenger miles for the year is currently 66 percent, compared to an average load ratio of 62.1 percent over the last 10 years, and exceeding a post-war high of 66.1 percent set in 1951. Higher load ratios, coupled with a continued emphasis on fuel efficiency, has curbed growth in commercial airline fuel consumption despite increases in the numbers of passengers flying.

Residual Fuel Oil

RESID GROWS DESPITE PRICE DIFFERENTIAL. An unfavorable differential between the prices for residual oil and natural gas has led to the third consecutive month of slack residual oil deliveries of less than 1 million B/D. In August, resid deliveries were 1 percent more than the deliveries of August 1993. Although the cumulative monthly deliveries through August have been slightly higher in 1994 than in 1993, this is due to the high demand for resid linked to the unusually cold weather earlier in the year, as well as a favorable resid-to-natural-gas price differential. During the summer months of June, July and August, deliveries of resid were 3 percent lower in 1994 than in 1993. In contrast, electric power generation was 1 percent higher along the East Coast, where electric utility demand for resid is concentrated.

The reduction in resid deliveries during a period of increased demand for electricity is the mainly result of a change in the differential of the relative prices for resid and natural gas, which many utilities may use as a substitute fuel source to meet peak demands. In August of 1993, the cost of energy from resid was 10 percent less expensive than that of natural gas. By the beginning of August, 1994, the price differential had reversed and the cost per BTU for resid was now 20 percent greater than the cost per BTU for natural gas. The effect of the new price differential has been to discourage the use of resid by utilities to meet peak loads brought on by summer cooling demands.

Thus, the relatively cool weather that predominated along the East Coast in August—there were 30 percent less cooling days in New England and the Mid-Atlantic States, and more than 6 percent less cooling days in the Southeast, than there were in August of last year—seemed to have little effect on either electrical generation, or deliveries of resid. Given the weak demand from electrical utilities and the unfavorable price differential with respect to natural gas, August deliveries are higher than estimated consumption by as much as 90 thousand B/D.

Other Oils

DECREASED DELIVERIES CONTRAST WITH STRONG SECOND QUARTER. July's decline in deliveries of "other oils" continued in August, though at a more modest 1 percent rate. The declines are somewhat surprising after a first half that had experienced reasonably strong growth for this category of petroleum products. Second quarter data now available by product show that, while much of the 4.6 percent growth in the first quarter was concentrated in liquefied petroleum gases, the second quarter's 5.4 percent growth covered most of the products in the "other oils" category. For LPGs, despite a second quarter decline for ethane alone, deliveries rose 95 thousand B/D or over 6 percent because of strong increases for propane and butane. Deliveries of naphtha-based petrochemical feedstocks rose about 40 thousand B/D and gasoil feedstocks rose about 20 thousand B/D, for a combined increase of over 10 percent. Deliveries of petroleum coke, asphalt, and lube oils rose as well.

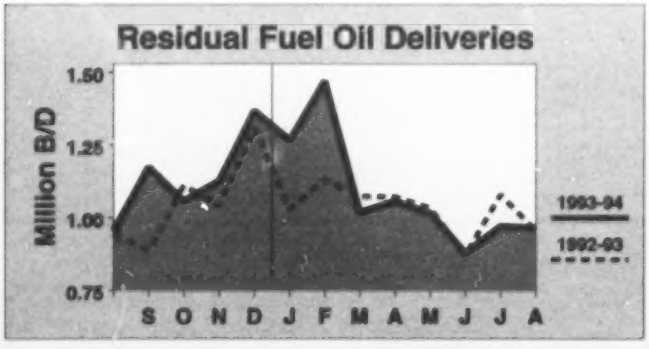
Over the longer term, petrochemical feedstock demand has been one of the major forces behind growth for "other oils". Deliveries over the past five years have risen about 200 thousand B/D, with deliveries of ethane, gasoil, and naphtha-based feedstocks accounting for most of the rise.

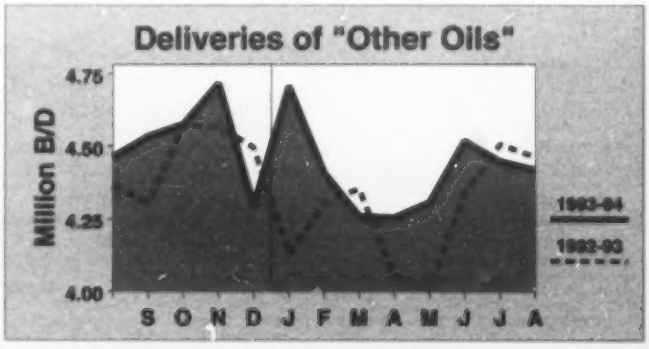
SUPPLY

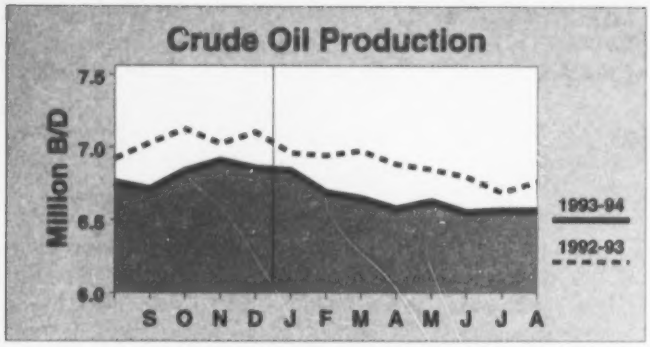
Production

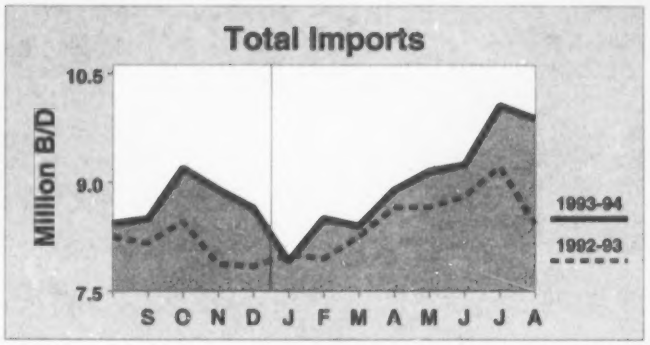
OUTPUT LOWER; OFFSHORE SHARE GROWS. Crude oil production continued to decline, but relatively more slowly than in the first half of the year. In August, Alaskan crude oil production was down by only 30 thousand B/D, or 2.0 percent, from last August. Nationally, crude production dropped 2.9 percent from August to August, compared to an average 3.6 percent annual decrease in the first half. Nevertheless, August's decrease in crude oil production was greater than July's relatively modest drop of 1.9 percent, which was at least partially due to the abnormally low Alaskan production of July, 1993.

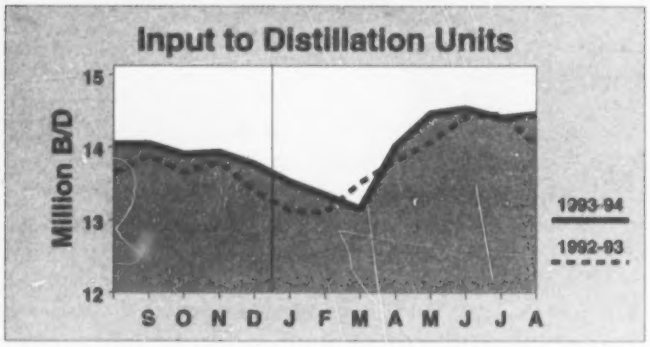
In recent years, the share of crude oil production from offshore operations has been slowly growing. In 1992, offshore production was roughly 17 percent of the total US production. By 1993, off-

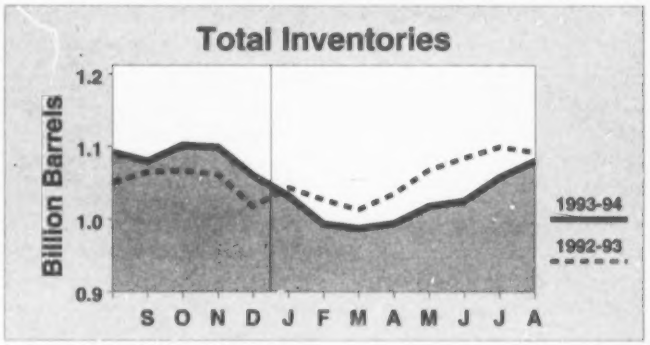












shore production had increased to 18.5 percent, and in the first quarter of 1994, offshore production accounted for over 19 percent of total production. In 1993, offshore production rose by more than 2 percent, while total production fell by 4.7 percent, and on-shore production fell by over 6 percent.

The gradual shift in production has been accompanied by a change in the composition of known domestic crude oil reserves. Since 1984, offshore reserves have held relatively constant, while the total US reserves have fallen more than 11 percent. In 1993 alone, total reserves fell by 3.3 percent, while offshore reserves increased by 6.6 percent, due to extensions of producing fields and the find of an estimated 313 million barrel field in the Gulf of Mexico. The increase in offshore production and reserves reflect the application of technological improvements in both exploration and drilling, which allow new fields to be developed at depths of more than 2000 feet.

Imports

IMPORTS REMAIN HIGH, EXCEEDING NEEDS. August's imports slipped from July's record high but, at 9.9 million B/D, still exceeded the estimated underlying need for imports by roughly 1 million B/D, as evidenced by the month's larger-than-average build in domestic petroleum inventories. Many of the swings in imports over this year have been tied to shifts in domestic inventories. Imports in the first quarter of 1994 had been 8.3 million B/D, less than the roughly 9 million B/D estimated to be needed to fill the gap between demand and domestic supply, thus bringing about a net draw on domestic inventories. Since then imports have risen, and in the past several months have actually been running above current requirements. As a result, over the past two months of strong imports, domestic inventories have been rebuilt by about 55 million barrels, or about 45 million barrels more than average. As for crude oil imports, August's declined from July's record 7.9 million B/D to 7.6 million B/D, but were still up 15 percent from a year ago.

Product imports rose over 25 percent, or 455 thousand B/D, to 2.24 million B/D, their highest August level in six years. Strong imports of finished gasoline, which at 520 thousand B/D, reached their highest monthly level in more than three years, were a major contributor to the increase as incremental imports from Europe continued to substitute at the margin for domestic gasoline refinery output. For the year so far, imports of finished gasoline have been averaging over 400 thousand B/D, compared with typical annual levels in recent past years of 250 to 300 thousand B/D.

Country-specific data, available through June, show that gasoline imports from Europe rose by 110 thousand B/D between the first and second quarters, from 80 thousand B/D to 190 thousand B/D. Although this was the main contributor to the increase in finished gasoline imports from 292 thousand B/D in the first quarter to 466 thousand B/D in the second, Western Hemisphere imports also rose. Imports from the Americas (primarily the Virgin Islands, Canada, Venezuela, and Brazil) rose about 60 thousand B/D, from 203 thousand B/D in the first quarter to about 264 thousand B/D in the second.

Meanwhile, distillate imports rose about 40 thousand B/D from below-trend levels a year ago. Imports of residual fuel oil, on the other hand, continued to be squeezed between low domestic demand and continued supply from domestic refineries. They sank to 311 thousand B/D, down about 75 thousand B/D from a year ago. Imports of kerosine jet fuel recovered somewhat from July's lower level of 75 thousand B/D, but at 97 thousand B/D were still down from the first half's unusually strong level of around 115 thousand B/D.

Refinery Operations

INPUTS GROW UTILIZATION HIGH. For August, input to distillation units increased 3 percent over year-ago levels to nearly 14.5 million B/D, its fifth month in a row at over 14.4 million B/D. For the summer's peak activity months of June through August, utilization has averaged 95.3 percent of reported capacity, up from 94.3 percent one year earlier and the highest for the three-month period since monthly utilization data began being collected in 1975.

As in recent prior months, increases in refinery activity did not necessarily translate into increases in gasoline production because of higher gasoline imports than a year ago. Output of finished gasoline slipped 0.4 percent versus one year earlier in August. So far this year, domestic output of gasoline has fallen nearly 190 thousand B/D, with higher imports of finished gasoline making up much of the difference. Reduced exports (which have traditionally been small in any case) and draws on domestic inventories kept supplies in balance with moderately higher deliveries.

Output of middle distillates, however, continued to surge, with distillate fuel oil production rising 8 percent to more than 3.3 million B/D for August—a level that traditionally has only been reached during the peak winter demand season. Production of kerosine jet fuel rose 20 percent. The increases for distillate and kero jet together boosted output of middle distillates by half a million B/D from last August. Production of residual fuel oil rose 10 percent, but still amounted to not much more than 800 thousand B/D.

Inventories

TOTAL STOCKS RISE AS CRUDE STOCKS DECLINE. Going by the experience in recent previous Augusts, there has been no clear direction for inventory changes for the month. This August, however, total inventories rose over 22 million barrels compared with the end of July. This, combined with July's above-average increase, took total inventories to a level approaching the average of recent Augusts for the first time this year. Crude oil inventories nevertheless fell 5 million barrels to 322 million barrels, 20 million barrels below the average for August and near the bottom of the range of the past several years.

For the major products, gasoline inventories fell 5 million barrels to 206 million barrels, a level not far below the recent-year average for August. Distillate stocks rose 6 million barrels to 136 million barrels, 10 million barrels above the recent-year average. However, the requirement to keep low and high sulfur distillates segregated in storage and transportation has likely raised minimum operating inventories, though to what extent is unknown.

August's increase for distillate stocks was essentially all in the high-sulfur category. Inventories of high-sulfur distillate, the category into which heating oil falls, have risen about 24 million barrels since the end of the heating season last spring. Inventories of low-sulfur diesel declined slightly in August from July levels but were still at close to the highest level since the on-highway requirement went into effect last October.

ESTIMATED UNITED STATES PETROLEUM BALANCE[1]
(Daily average in thousands of 42 gallon barrels)

Disposition and Supply	August 1994[2]	August 1993[3]	August % Change	Year-to-Date 1994[4]	Year-to-Date 1993[3]	Year-to-Date % Change
Disposition:						
Total motor gasoline	7,905	7,864	0.5	7,533	7,442	1.2
Finished oxygenated	601	739[E]	(18.7)	1,229	1,239[E]	(0.8)
Finished reformulated	0	na	na	0	na	na
Finished other	7,304	7,125[E]	2.5	6,304	6,203[E]	1.6
Naphtha-jet	51	101	(49.5)	64	121	(47.1)
Kerosine-jet	1,521	1,413	7.6	1,463	1,343	8.9
Distillate fuel oil	2,972	2,820	5.4	3,171	2,995	5.9
≤ 0.05 percent sulfur	1,978	464[E]	326.3	1,759	361[E]	387.3
> 0.05 percent sulfur	994	2,356[E]	(57.8)	1,412	2,634[E]	(46.4)
Residual fuel oil	965	955	1.1	1,076	1,029	4.6
All other oils (including crude losses)	4,419	4,463	(1.0)	4,414	4,270	3.4
Reclassified[5]	-185	-284	na	-134	-183	na
Total domestic products supplied	17,648	17,332	1.8	17,587	17,017	3.4
Exports	895	829	8.0	906	1,002	(9.6)
Total disposition	18,543	18,161	2.1	18,493	18,019	2.6
Supply:						
Domestic liquids production:						
Crude oil (including condensate)	6,563	6,758	(2.9)	6,632	6,855	(3.3)
Natural gas liquids	1,730	1,747	(1.0)	1,687	1,760	(4.2)
Other supply[6]	1,095	997	9.8	1,243	1,208	2.9
Total domestic supply	9,388	9,502	(1.2)	9,562	9,823	(2.7)
Imports:						
Crude oil (excluding SPR imports)	7,637	6,641	15.0	6,947	6,712	3.5
From Canada	935	966	(3.2)	948	858	10.5
All other	6,702	5,675	18.1	5,999	5,854	2.5
Products	2,244	1,789	25.4	2,065	1,790	15.4
Residual fuel oil	311	387	(19.6)	362	350	3.4
All other	1,933	1,402	37.9	1,703	1,440	18.3
Total imports	9,881	8,430	17.2	9,012	8,502	6.0
Total supply	19,269	17,932	7.5	18,574	18,325	1.4
Stock change, all oils	726	-229	na	81	306	na
Refinery Operations:						
Input to crude distillation units	14,455	14,040	3.0	13,991	13,822	1.2
Operable capacity	15,175	15,140	0.2	15,130	15,147	(0.1)
Refinery utilization[7]	95.3	92.7	na	92.5	91.3	na
Crude oil runs	14,363	13,844	3.8	13,815	13,566	1.8

	August 1994	July 1994	August 1993	% Change From Month Ago	% Change From Year ago
Stocks (at month-end, in millions of barrels):					
Crude oil (excluding SPR stocks)	321.8	326.4	335.5	(1.4)	(4.1)
Unfinished oils	97.2	95.5	107.5	1.8	(9.6)
Total motor gasoline	206.2	210.7	202.0	(2.1)	2.1
Finished oxygenated	5.9	2.9	8.8	103.5	(33.0)
Finished reformulated	0.0	0.0	na	na	na
Finished other	163.7	171.6	157.9	(4.6)	3.7
Blending components	36.6	36.2	35.3	1.1	3.7
Naphtha-jet	1.2	1.3[R]	3.8	(7.7)	(68.4)
Kerosine-jet	42.9	40.6	39.6	5.7	8.3
Distillate fuel oil	135.8	129.7	128.2	4.7	5.9
≤ 0.05 percent sulfur	65.9	66.4	44.5	(0.8)	48.1
> 0.05 percent sulfur	69.9	63.3	83.7	10.4	(16.5)
Residual fuel oil	39.1	37.9	44.5	3.2	(12.1)
All other oils	235.9	215.5[R]	230.8	9.5	2.2
Total all oils	1,080.1	1,057.6[R]	1,091.9	2.1	(1.1)

1—Total supply, i.e., production plus imports adjusted for net stock change is equal to total disposition from primary storage. Total disposition from primary storage less exports equals total domestic products supplied. Information contained in this report is derived from information published in the API *Weekly Statistical Bulletin* and is based on historical analysis of the industry. All data reflect the most current information available to the API and include all previously published revisions. **2**—Based on API estimated data converted to a monthly basis. **3**—Source: U.S. Energy Information Administration (including any adjustments). **4**—Data for most current two months are API estimates. Other data come from U.S. Energy Information Administration (including any adjustments). **5**—An adjustment to avoid double counting resulting from differences in product classifications among different refineries and blenders. **6**—Includes unaccounted-for crude oil, withdrawals from the SPR when they occur, processing gain, field production of other hydrocarbons and alcohol, and downstream blending of ethanol. **7**—Represents "Input to crude oil distillation units" as a percent of "Operable capacity". **R**—Revised. **E**—Estimated. **na**-Not available.